

Course Syllabus

Course Information

Economics 540B
Microeconomic Theory II
Spring 2009
Faner 4135
TTh 2:00-3:15 p.m.

Instructor Information

Daniel Primont
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Office Hours, Faner 4145
TTh 9:00-10:50 a.m., 3:15-4:15 p.m.

Teaching Assistant: Wei Gao, Faner 4042, weigao@siu.edu

Office Hours: Wed. 10:00 a.m. - 12:00 p.m.

This is the first of two doctoral-level courses in Microeconomics. The required textbook reading will be assigned from :

Microeconomic Analysis by Hal R. Varian. New York: W. W. Norton & Company, Third Edition, 1992.

Other required readings are listed on the last page of this syllabus.

Grading: There will be two exams during the semester and a comprehensive final exam. The course grade is determined using the following weights.

	Date	Weight
Exam 1	Thursday, February 19	30%
Exam 2	Thursday, April 16	30%
Final Exam	Friday, May 8	40%
Total		<hr/> 100%

Homework will be assigned but not graded. The homework assignments are designed to help you learn the course material. You are strongly encouraged to work together on the homework assignments.

Course Outline: Assigned readings in Varian followed by suggested further readings in brackets. Item $[n]$ refers to entry n listed under References.

1. The Competitive Firm

- (a) Technology, Varian, Ch. 1., pp. 1-22.
Mas-Colell, Whinston, and Green (1995) [20], pp. 127-135.
Specification, Debreu (1959) [8], pp. 37-42. The technical rate of substitution, Homogenous and homothetic technologies.
- (b) Profit Maximization, Varian, Ch. 2, pp. 23-39.
Supply and demand functions, Comparative statics Varian (1984) [27].
- (c) Profit Function, Varian, Ch. 3, pp. 40-48.
Hotelling (1932) [15], Hicks (1946) [13], Samuelson (1947) [23], Mas-Colell, Whinston, and Green (1995) [20], pp. 135-139.
Properties of the profit function, Supply and demand functions, Envelope theorem, Comparative statics.
- (d) Cost Minimization, Varian, Ch. 4, pp. 49-63.
Calculus of cost minimization, Functional forms, Algebra of cost minimization Varian (1984) [27].
- (e) Cost Function, Varian, Ch. 5, pp. 64-80.
Mas-Colell, Whinston, and Green (1995) [20], pp. 139-147.
Average and marginal costs, Geometry, Long-run and short-run cost, Properties of cost functions Diewert (1974) [9], McFadden (1978) [19], Diewert (1982) [10].
- (f) The profit and the cost function: comparative statics revisited.
Nagatani (1978) [21] (REQUIRED).
- (g) Elasticity of substitution. Hicks (1932) [12], Blackorby and Russell (1989) [6] (REQUIRED), Blackorby, Primont, and Russell (2007) [4] (REQUIRED).
- (h) Duality, Varian, Ch. 6, pp. 81-93.
Diewert (1974) [9], Diewert (1982) [10], Primont and Sawyer (1993) [22].
Exam 1, Thursday, February 21, 2008

2. **Efficiency**, Färe and Primont (1995) [11], Chapters 2,3 (REQUIRED).

3. The Rational Consumer

- (a) Utility Maximization, Varian, Ch. 7, pp. 94-115.
Mas-Colell, Whinston, and Green (1995) [20], pp. 40-63.
Preferences, Utility function, Indirect utility function, Expenditure function, Hicks (1946) [13], Functional forms.

- (b) Consumer Choice, Varian, Ch. 8, pp. 116-143.
 Mas-Colell, Whinston, and Green (1995) [20], pp. 64-75, 91-92.
 The Slutsky equation, Comparative statics, Duality, Blackorby, Primont, and Russell (1978) [3], Ch. 2, Revealed Preference, Samuelson (1948) [24], Houthakker (1950) [16], Hicks (1956) [14], Varian (1982) [25], Varian (1983) [26]
- (c) Consumer Demand, Varian, Ch. 9, pp. 144-159.
 Endowments, Labor supply, Homothetic utility functions, Goods aggregation, Blackorby, Primont, and Russell (1978) [3], Ch. 3, Blackorby, Primont, and Russell (1998) [5], Aggregation across consumers.
- (d) Uncertainty, Varian, Ch. 11, pp. 172-197.
 Mas-Colell, Whinston, and Green (1995) [20], pp. 167-215.
 Lotteries, Expected Utility, Absolute risk Aversion, Relative risk aversion, Paradoxes, Machina (1982) [18].
- Exam 2**, Thursday, April 17, 2008

4. Equilibrium and Optimality

- (a) Exchange, Varian, Ch. 17, pp. 313-337.
 Agents and goods, Walrasian equilibrium, Walras's Law, Existence, Pareto efficiency, Welfare theorems, Welfare maximization.
- (b) Production, Varian, Ch.18, 338-57.
 Arrow and Debreu (1954) [1], Koopmans (1957) [17], Essay 1, Arrow and Hahn (1971) [2]
- Final Exam**, Monday, May 5, 7:50 - 9:50 a.m.

References

- [1] Arrow, Kenneth and Gerard Debreu, "Existence of Equilibrium for a Competitive Economy," *Econometrica* (1954) 22: 265-290.
- [2] Arrow, Kenneth and Frank Hahn, *General Competitive Analysis*, San Francisco: Holden-Day, 1971.
- [3] Blackorby, Charles, Daniel Primont, and R. Robert Russell, *Duality, Separability, and Functional Structure: Theory and Applications*. New York: Elsevier North-Holland, 1978.
- [4] Blackorby, Charles, Daniel Primont, and R. Robert Russell, "The Morishima gross elasticity of substitution," *Journal of Productivity Analysis*, Vol. 28, No. 3, (December, 2007), pp. 203-208.

- [5] Blackorby, Charles, Daniel Primont, and R. Robert Russell (1998), "Separability: A Survey," in the *Handbook of Utility Theory*, Volume I, edited by Salvador Barberà, Peter J. Hammond, and Christian Seidl, Norwell, Mass.: Kluwer Academic Publishers, 1998, pp. 49-121.
- [6] Blackorby, Charles, and R. Robert Russell, "Will the Real Elasticity of Substitution Please Stand Up?," *American Economic Review* (1989) 79(4): 882-888.
- [7] Deaton, Angus and John Muellbauer, *Economics and Consumer Behavior*, Cambridge, New York : Cambridge University Press,
- [8] Debreu, Gerard, *Theory of Value: An Axiomatic Analysis of Economic Equilibrium*, New York: Wiley, 1959.
- [9] Diewert, W.E., "Applications of Duality Theory," in, *Frontiers of Quantitative Economics*, Vol. II, Papers invited for presentation at the Econometric Society Winter Meetings, Toronto, 1972. Edited by M.D. Intriligator and D.A. Kendrick. Amsterdam: North-Holland, 1974.
- [10] Diewert, W.E., "Duality Approaches to Microeconomic Theory," in Arrow, Kenneth J. and Intriligator, Michael D. (Eds.), *Handbook of Mathematical Economics*, Volume II, Amsterdam: North-Holland, 1982.
- [11] Färe, Rolf and Daniel Primont, *Multi-Output Production and Duality: Theory and Applications*, Kluwer Academic Press, 1995.
- [12] Hicks, John Richard, Sir, *Theory of Wages*, London: Macmillan, 1932.
- [13] Hicks, John Richard, Sir, *Value and Capital*, Oxford, England: Clarendon Press, 1946.
- [14] Hicks, John Richard, Sir, *A Revision of Demand Theory*, London: Oxford University Press, 1956.
- [15] Hotelling, Harold, "Edgeworth's Taxation Paradox and the Nature of Demand and Supply Functions," *Journal of Political Economy*, Vol. 40, No. 5, (October, 1932), pp. 577-616.
- [16] Houthakker, Hendrik, "Revealed Preference and the Utility Function," (1950), *Economica*, **17**: 159-174.
- [17] Koopmans, Tjalling, *Three Essays in the State of Economic Science*, New Haven: Yale University Press, 1957.
- [18] Machina, Mark J. (1987), "Choice Under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives*, 1 (1), (1987), pp. 121-154. [Reprinted in *Readings in applied microeconomic theory : market forces and solutions*, Robert E. Kuenne, Editor, Malden, Mass: Blackwell, 2000, pp. 335-387].

- [19] McFadden, D., "Cost, Revenue, and Profit Functions," in M. Fuss & D. McFadden (Eds.), *Production Economics: A Dual Approach to Theory and Applications*. Amsterdam: North-Holland, 1978.
- [20] Mas-Colell, Andreu, Michael D. Whinston, and Jerry Green, *Microeconomic Theory*, New York: Oxford University Press, 1995.
- [21] Nagatani, Keizo, "Substitution and Scale Effects in Factor Demands," *The Canadian Journal of Economics*, Vol. 11, No. 3, (August, 1978), pp. 521-527.
- [22] Primont, Daniel and Carl Sawyer, "Recovering the Production Technology from the Cost Function," *Journal of Productivity Analysis*, Vol. 4, No. 4, November, 1993, pp. 347-352.
- [23] Samuelson, Paul, *Foundations of Economic Analysis*. Cambridge, Mass: Harvard University Press, 1947.
- [24] Samuelson, Paul, "Consumption Theory in Terms of Revealed Preference," *Econometrica*, Vol. 15, (1948), pp. 243-253.
- [25] Varian, Hal R., "The Nonparametric Approach to Demand Analysis," *Econometrica*, Vol. 50, No. 4, (July, 1982), pp. 945-973.
- [26] Varian, Hal R., "Non-Parametric Tests of Consumer Behaviour," *The Review of Economic Studies*, Vol. 50, No. 1. (Jan., 1983), pp. 99-110.
- [27] Varian, H. "The Nonparametric Approach to Production Analysis," *Econometrica* (1984) 52: 579-597.

Week	Dates	Topic/Required Reading
1	Jan 13, 15	Technology, Varian, Ch. 1., pp. 1-22
2	Jan 20, 22	Profit Maximization, Varian, Ch. 2, pp. 23-38
3	Jan 27 Jan 29	Profit Function, Varian, Ch. 3, pp. 40-48 Cost Minimization, Varian, Ch. 4, pp. 49-61.
4	Feb 3 Feb 5	Cost Minimization, Varian, Ch. 4, pp. 61-63. Cost Function, Varian, Ch. 5, pp. 64-80 Comparative statics revisited [21]
5	Feb 10 Feb 12	Elasticity of Substitution revisited [6][4] Duality, Varian, Ch. 6, pp. 81-93
6	Feb 17 Feb 19	Duality Continued Exam 1
7	Feb 24, 26	Efficiency, [11] Ch. 2, pp. 7-36
8	Mar 3, 5 Mar 10, 12	Efficiency, [11] Ch. 3, pp. 43-66 Spring Break
9	Mar 17, 19	Utility Maximization, Varian, Ch. 7, pp. 94-115
10	Mar 24, 26	Consumer Choice, Varian, Ch. 8, pp. 116-137
11	Mar 31, Apr 2	Consumer Demand, Varian, Ch. 9, pp. 144-157
12	Apr 7, 9	Uncertainty, Varian, Ch. 11, pp. 172-190
13	Apr 14 Apr 16	Uncertainty, Varian, Ch. 11, pp. 190-194 Exam 2
14	Apr 21, 23	Exchange, Varian, Ch. 17, pp. 313-337
15	Apr 28, 30	Production, Varian, Ch.18, 338-53
Finals		Final Exam: Friday, May 8, 12:50 - 2:50 p.m..

As the instructor for this course, I am required by the administration to include the following paragraphs.

Emergency Procedures:

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on the BERT'S website at www.bert.siu.edu, Department of Public Safety's website www.dps.siu.edu (disaster drop down) and in the Emergency Response Guidelines pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.